

# Application Plan Maintenance

The application plan maintenance part of the Natural Tools for DB2 is used to generate JCL code to:

- create database request modules (DBRMs) from your Natural programs,
- maintain DB2 application plans and packages from within your Natural environment.

Two modes of operation are available: fixed mode and free mode.

In fixed mode, maintenance screens with syntax graphs help you to specify the correct commands. Complete JCL members can be generated using predefined job profiles. You simply enter the required data in input maps. The data are checked to ensure that they comply with the correct syntax. Then JCL members are generated from these data. The members can be submitted directly by pressing PF4 (Submi). But you can also switch to free mode by pressing PF5 (Free).

Pressing PF5 in fixed mode invokes the free-mode editor, which can be used to modify JCL code generated in fixed mode, without the syntactical restrictions imposed. In free mode you can submit the JCL member currently in the source area by pressing PF4 (as in fixed mode).

This section covers the following topics:

- Commands and PF-Key Settings
  - Invoking the Application Plan Maintenance Function
  - Prepare Job Profiles
  - Create DBRMs
  - Bind Plan
  - Rebind Plan
  - Free Plan
  - Bind Package
  - Rebind Package
  - Free Package
  - List JCL Function
  - Display Job Output
-

## Commands and PF-Key Settings

Within the maintenance screens in fixed mode, various windows can be invoked. These windows are accessed via 1-byte control fields.

### To invoke such a window

- Enter "S" in the corresponding control field.

If the control field displays an "X", data have already been entered in the corresponding window.

In addition, the following PF-key settings apply in fixed mode:

Key	Function
PF4	Generates JCL code and submits it.
PF5	Generates JCL code and enters free mode.
PF6	Scrolls to the top of a window.
PF7	Scrolls backwards in windows.
PF8	Scrolls forwards in windows.
PF9	Scrolls to the bottom of a window.
PF10	Shows the previous screen.
PF11	Shows the next screen.

In free mode, JCL code can be edited and submitted. Editing of JCL code is done via edit and line commands; see Editing within the Natural Tools for DB2.

Generated JCL code is submitted by pressing PF4 (Submi).

Apart from being submitted, JCL code can also be copied, listed, purged, retrieved from, or saved in a Natural library. All this is done via maintenance commands.

## Invoking the Application Plan Maintenance Function

### To invoke the Application Plan Maintenance function

- Enter function code "A" on the Natural Tools for DB2 Main Menu.

The Application Plan Maintenance menu is displayed:

16:14:02	***** NATURAL TOOLS FOR DB2 *****	1999-09-30
- Application Plan Maintenance -		
Code	Function	Parameter
PP	Prepare Job Profile	
CD	Create DBRMs	Lib
BI	Bind	Lib, Obj
RB	Rebind	Lib, Obj
FR	Free	Lib, Obj
LJ	List JCL	Lib, JCL
JO	Display Job Output	Node
?	Help	
.	Exit	
Code ..	Object .....	_____
	Library .....	SAG_____
	JCL Member ..	_____
	Node .....	148
Command ==>		
Enter-PF1---	PF2---	PF3---
PF4---	PF5---	PF6---
PF7---	PF8---	PF9---
PF10---	PF11---	PF12---
Help	Exit	Logn Canc

The following functions are available:

Code	Description
PP	Defines job profiles for DBRM creation and plan/package maintenance.
CD	Generates JCL to create database request modules.
BI	Generates JCL to bind a plan or package.
RB	Generates JCL to rebind a plan or package.
FR	Generates JCL to free a plan or package.
LJ	Invokes the free-mode editor.
JO	Displays job output. This function only applies if the Entire System Server is installed.

In addition, four parameters are available, which must be specified according to the selected function:

Parameter	Description
Object	Specifies whether to maintain a plan ("PLAN" or "PL") or a package ("PACKAGE" or "PK").
Library	<p>Specifies the name of a Natural source library.</p> <p>All existing libraries except the ones beginning with "SYS" can be specified; a library must be specified for JCL maintenance. The library name is preset with your Natural user ID.</p>
JCL Member	<p>If a valid member name is specified, the corresponding JCL member is displayed.</p> <p>If a value is specified followed by an asterisk (*), all JCL members in the specified library whose names begin with this value are listed.</p> <p>If asterisk notation is specified only, a selection list of all JCL members in the specified library is displayed.</p> <p>If the JCL Member field is left blank, the empty free-mode editor screen is displayed.</p>
Node	Specifies the number of the node to be used by the Entire System Server. The default number "148" can be overwritten.

## Prepare Job Profiles

If you want to generate JCL to create a DBRM or to bind, free, or rebind a plan or package, you have to specify a job name, job cards, and the name of a job profile. Thus, you have to prepare the job profiles first. Once your job profiles are defined, you can always immediately select the corresponding function if you want to create a new DBRM or if you want to bind, free, or rebind an a plan or package using your predefined job profiles.

### To define a job profile

- Invoke the Prepare Job Profile function by entering function code "PP" on the Application Plan Maintenance menu.

The Prepare Job Profile menu is invoked:

```

16:14:33          ***** NATURAL TOOLS FOR DB2 *****          1999-09-30
                  - Prepare Job Profile -

                                Code Function

                                J   Default Job Cards
                                D   Profile for Create DBRM Job
                                P   Profile for DSN Jobs
                                ?   Help
                                .   Exit

                                Code .. _   Profile .. _____

Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help           Exit                                     Canc

```

Code	Description
J	Defines user-specific default job cards.
D	Defines job profiles for the DBRM creation function.
P	Defines job profiles for the plan or package maintenance functions.

In addition, the parameter Profile is available, which is relevant to function codes "D" and "P" only. With function code "J", Profile corresponds to "USER".

Parameter	Description
Profile	<p>Specifies the name of an already existing job profile.</p> <p>If a valid profile name is specified, the free-mode editor with the specified job profile is invoked, where the profile can be modified and saved.</p> <p>If a value is specified followed by an asterisk (*), all existing job profiles whose names begin with this value are listed.</p> <p>If asterisk notation is specified only, a selection list of all existing job profiles is displayed.</p> <p>If the field is left blank, the corresponding fixed-mode profile screen is invoked, where a new job profile can be created. To save the new profile, you have to switch to free mode.</p>

Job profiles can be maintained (that is, copied, listed, purged, retrieved from, or saved in a Natural library) via maintenance commands.

**Note:**

Job profiles are saved on the Natural system file (FNAT).

## Default Job Cards

All jobs generated by the Application Plan Maintenance function require job cards. With the Default Job Cards function, you can define a default job card for each user. The default job cards apply to all function screens on which you can generate JCL. Default job cards can be invoked and modified on all these screens. Asterisk notation (\*) can be used to select the desired job card from a list.

To define a default job card, invoke the Default Job Cards function by entering function code "J" in the Prepare Job Profile menu. The Default Job Cards screen is invoked, where you can create and save your user-specific job cards. To do so, you can also read (directly or from a list) and modify an already existing default job card. Existing job cards can be purged, too.

16:14:33	***** NATURAL TOOLS FOR DB2 *****	1999-09-30
- Default Job Cards -		
R e a d ,   S a v e ,   L i s t   o r   P u r g e   D e f a u l t   J o b   C a r d s   _		U s e r   I D   . .   _____
J o b   N a m e   . . .   _____		
J o b   C a r d s   . .		
//	J O B   _____	
//	_____	
//	_____	
//	_____	
//	_____	
Command ==>		
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---		
Help	Exit	Canc

As you will see on the following pages, all function screens used to specify jobs contain the same two fields - Job Name and Job Cards - as the Default Job Cards screen. Thus, it is possible to override the default job cards in each of these screens, too.

The Job Name field enables you to change the name of the job.

In the Job Cards field, you can enter an "S" to invoke a window where you can modify all the job cards.

## Profile for Create DBRM Job

The Profile for Create DBRM Job function enables you to define profiles for the Create DBRMs functions. Job profiles for DBRM creation consist of JCL which includes the following predefined set of substitution parameters:

Parameter	Description
@JOBCARDS	Is replaced by the job cards entered on the create DBRM screen (up to five lines). You can also code the job cards in the profile and omit the job cards modifier.
@COMMAND	Is replaced by the string "CREATE DBRM".
@DBRMNAME	Is replaced by the name of the DBRM, which can be up to eight characters long.
@CREATE-DBRM	Is replaced by the command input for the static generation step. This parameter must be placed <b>after</b> the //CMSYNIN card and must comply with the Assembler naming conventions.
@COMMAN2	Is replaced by the string "MODIFY".
@MODIFY	Is replaced by the command input for the static modification step.
@XR-START @XR-END	Both mark the JCL to contain the Natural Assembler XREF data; if no XREF option is specified, the JCL is deleted again.

To define a job profile for DBRM creation, invoke the Profile for Create DBRM Job function by entering function code "D" on the Prepare Job Profile menu. If you specify a valid profile name, too, the free-mode editor containing the specified profile is invoked, where you can modify, save, and rename the displayed profile. If you leave the Profile field blank, the Profile for Create DBRM Job screen is invoked, which helps you in creating a new profile. To save the newly created job profile, you have to switch to free mode by pressing PF5 (Free).

```

16:15:18          ***** NATURAL TOOLS FOR DB2 *****          1999-09-30
                    - Profile for Create DBRM Job -

+----- NATURAL Parameters -----+
! Name of Batch NATURAL      : _____ !
! NATURAL Parameter         : _____ !
! STEPLIB DD                : _         !
+----- Precompile Parameters -----+
! DBRMLIB DD                : _____ !
! STEPLIB DD                : _         !
+----- Ass-Nat-Xref-Library -----+
! CMWKF02 DD                : _____ !
+-----+

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Exit      Free      Canc

```



## Profile for DSN Jobs

The Profile for DSN Jobs function enables you to define profiles for the Bind, Rebind, and Free functions. The same profiles can be used for each of the three functions.

Profiles for DSN jobs consist of JCL which includes the following predefined set of substitution parameters:

Parameter	Description
@JOBCARDS	Is replaced by the current job cards; you can also code the job cards in the profile and omit the job cards modifier.
@DSNCMD	Is replaced by the command input for the bind, rebind or free function.
@PLANNAME	For the bind function, it is replaced by the name of the plan or package. For the rebind and free functions, it is set to blank.
@COMMAND	Is replaced by the string "BIND", "REBIND" or "FREE" respectively.

To define a profile for DSN jobs, invoke the Profile for DSN Jobs function by entering function code "P" on the Prepare Job Profile menu. If, in addition, you specify a valid profile name, the free-mode editor containing the specified profile is invoked, where you can modify, save, and rename the displayed profile. If you leave the Profile field blank, the Profile for DSN Jobs screen is invoked, which helps you in creating a new profile for DSN jobs. To save the newly created job profile, you have to switch to free mode by pressing PF5 (Free).

```

16:15:18          ***** NATURAL TOOLS FOR DB2 *****          1999-09-30
                      - Profile for DSN Jobs -

DB2 System .. _____ Retries .. ____

+----- Steplibs for DSN Jobs -----+
! STEPLIB      DD      : _____ !
!               : _____ !
!               : _____ !
!               : _____ !
!               : _____ !
+-----+

+----- DBRM Libraries for Bind -----+
! DBRMLIB      DD      : _____ !
!               : _____ !
!               : _____ !
!               : _____ !
!               : _____ !
+-----+

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help      Exit      Free      Canc

```

## Loading Job Profiles

Job profiles for DBRM creation and plan/package maintenance are loaded from the dataset CMWKF01 in batch mode using the LOADPROF command.

LOADPROF is issued in the library SYSDB2; the following menu is displayed:

```

16:53:20          ***** NATURAL TOOLS FOR DB2 *****          1999-09-30
                    - Load Job Profiles -

                                Code Function
                                -----
                                D   Load Profile for Create DBRM
                                B   Load Profile for DSN Jobs
                                .   Exit
                                -----
Code .. _   Profile .. _____
              Replace .. N

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
              Exit                                     Canc

```

The following functions are available:

Code	Description
D	Serves to load job profiles for DBRM creation.
B	Serves to load job profiles for plan or package maintenance.

The following parameters apply:

Parameter	Description
Profile	Specifies the name of the profile to be loaded. This parameter must be specified.
Replace	Specifies whether it is to be replaced or not if a profile with the specified name already exists.  Y    An already existing profile is replaced.  N    An already existing profile is <b>not</b> replaced. This parameter is optional; the default setting is "N".

## Unloading Job Profiles

Job profiles for DBRM creation and plan/package maintenance are unloaded and written to the dataset CMWKF01 in batch mode using the UNLDPROF command.

If UNLDPROF is issued in the library SYSDB2, the following menu is displayed:

16:53:20	***** NATURAL TOOLS FOR DB2 *****	1999-09-30
Load Job Profiles		
Code Function		
D	Unload Profile for Create DBRM	
B	Unload Profile for DSN Jobs	
.	Exit	
Code .. _ Profile .. _____		
Command ==>		
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---		
Exit		Canc

The following functions are available:

Code	Description
D	Unloads job profiles for DBRM creation.
B	Unloads job profiles for plan or package maintenance.

The following parameter applies:

Parameter	Description
Profile	Specifies the name of the profile to be unloaded.
	This parameter must be specified.

## Create DBRMs

To create a DBRM you have to generate JCL for DBRM creation. To do so, invoke the Create DBRMs function by entering function code "CD" on the Application Plan Maintenance menu. The Create DBRM screen is invoked, where, in addition to a job name, your user-specific default job cards, and the desired job profile, you can specify all necessary information for the CREATE DBRM and MODIFY commands

```

16:15:44              ***** NATURAL TOOLS FOR DB2 *****              1999-09-30
                                - Create DBRM -

Job Name ... DBRMJOB_          Job Cards .. X                      Profile ..EXDBRM__

>>-- CREate DBRM -- DBRM1_____ -- USing --+-- _ -- PREdict DOcumentation --+-->
                                     +-- _ -- INput DATA -----+

>-+-----+-----+-----+-----+-----+-----+-----+-----+-----+>
   +- With XRef - _____ +-      +- LIbrary - _____ +-      +- FS - ____ +-
           ( NO, YES, FORCE )                !                       ( ON, OFF )

>-----+-----+-----+-----+-----+-----+-----+-----+-----+<
       +---- _ --- NAT Library , NAT Member +-----++
                                           + , excl.Member+-

>>----- MODIFY+-----+-----+-----+-----+-----+-----+>
                               +- _ - XRef -+

Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
        Help            Exit Submi Free                                   Canc
```

In the Job Name field, a valid job name must be specified. If you only want to change the name of the job, you can do this using the Job Name field, too.

Via the Job Cards field, you can override your default job cards. To do so, enter an "S" in the Job Cards field. A window containing your job cards is displayed.

An "X" in the Job Cards field indicates that job cards for DBRM creation are defined. A blank Job Cards field indicates that no job cards are defined.

In the Profile field, you can specify the name of a valid job profile for DBRM creation. If a value is specified followed by an asterisk (\*), all existing job profiles whose names begin with this value are listed. If asterisk notation is specified only, a selection list of all available job profiles is displayed.

If you use the INPUT DATA option, a window is displayed, where you have to specify the Natural libraries and programs (members) to be contained in the DBRM.

```

16:15:44                ***** NATURAL TOOLS FOR DB2 *****                1999-09-30
                                - Create DBRM -

Job Name ... DBRMJOB_                Job Cards .. X                Profile .. EXDBRM_

>-- CREate DBRM -- DBRM1__ -- Using --- _ -- PREDict DOcumentation --->
                                +-- _ -- INput DATA -----+

>+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
+- With XRef - _____ -+      +- LIBrary - _____ -+      +- FS - ____ -+
      ( NO, YES, FORCE )                !                        ( ON, OFF )

>-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+----->
      +---- S   ! NAT Library,NAT Member,excl.Member 1 / 2   !
              !      Test____ , PROG1____ , _____   !
              !      Test____ , P*____ , PROG1____         !
>>-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+----->
              !      _____ , _____ , _____   !
              !      _____ , _____ , _____   !
              !      _____ , _____ , _____   !
Command ==>                !                        !
Enter-PF1---PF2---P +-----+-----+-----+-----+-----+-----+ F11--PF12---
      Help          Exit  Submi Free  --      -      +      ++          Canc

```

In the third column of the above window, you can specify a program that is to be excluded from the DBRM; this is possible only if you specify an asterisk with the program name in the second column.

Within the window, you can scroll using PF6 (--), PF7 (-), PF8 (+), or PF9 (++)

The generated JCL code can be either edited and/or saved in free mode by pressing PF5 (Free), or submitted immediately by pressing PF4 (Submi).

## Bind Plan

To generate JCL to bind a plan, invoke the Bind function by entering function code "BI" on the Application Plan Maintenance menu and "PLAN" or "PL" in the Object field. The first Bind Plan screen is invoked, where all necessary information must be specified.

```

23:16:38          ***** NATURAL TOOLS FOR DB2 *****          1999-09-30
                        - Bind Plan -

Job Name ... BINDJOB_          Job Cards .. X          Profile .. EXBIND1_

>>- BIND +-----+-----+-----+-----+-----+-----+-----+-----+>
          !                   ! !                   ! !                   !
          + PLAN ( TESTPLAN )+ + OWNER ( _____ )+ + QUALIFIER ( _____ )+
              plan-name          auth-id          qualifier-name

>+>- MEMBER +- X ---(member name)-----+-----+-----+-----+-----+>
          !                   !                   !                   !
          !                   +- LIBRARY -- _ --(library name)-+ !
          !                   !                   !                   !
          +>- PKLIST -- X --(+-----+-----+collection-id.package-id)-----+>
              +-location-name.-+

          Read member name/package list from PREDICT?  N (Y/N)  DONE

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Exit  Submi Free                                Next  Canc

```

Apart from the specifications to be made in the Job Name, Job Cards, and Profile fields, to BIND a plan, you have to specify the name of the plan and all DBRMs and/or packages that are to be bound into the specified plan.

You invoke the window to specify the DBRM members and/or package lists by entering an "S" in the MEMBER and/or PKLIST field respectively. Either or both windows must be invoked; otherwise, you are prompted by the system to do so.

Within the windows for DBRM and package specification, you can scroll using PF6 (--), PF7 (-), PF8 (+), or PF9 (++).

If Predict is installed and a plan is documented in Predict, the DBRM members and/or package lists assigned to a plan in Predict can be read by entering "Y" for this option (default is "N"). A maximum of 50 DBRM members and/or 20 package lists can be read.

If you use this option and DBRM members and/or package lists have been successfully read, the MEMBER and PKLIST selection fields are marked with "X", and "DONE" is displayed next to the "(Y/N)" input field; "FAILED" is displayed if:

- inconsistencies in the member/package list definition were detected,
- over 50 DBRM members or more than 20 package lists were defined for the specified plan,
- no members or package lists were defined for the specified plan,
- the plan was not documented in Predict at all.

**Note:**

If Predict is not installed, the field "Read member name / package list from Predict?" does not appear on the above screen.

Pressing PF11 (Next) takes you to a second Bind Plan screen, where you can specify further options of the DB2 BIND command. A keyword is generated by entering its first letter in the corresponding input field; the default values are highlighted.

```

16:17:05          ***** NATURAL TOOLS FOR DB2 *****          1999-09-30
                        - Bind Plan -

>-----+-----+-----+-----+-----+-----+-----+-----+-----+----->
!               ! !               ! !               !
+- _____ --( PREPARE )-+ +- FLAG --( _ )-+ +- EXPLAIN --( ____ )-+
( NODEFER or DEFER)          ( I, W, E or C)          ( YES or NO )
>-----+-----+-----+-----+-----+-----+-----+-----+-----+----->
!               ! !               ! !               !
+- VALIDATE ( ____ )-+ +- ISOLATION ( _ )-+ +- CACHESIZE ( ____ )+
( RUN or BIND )          ( RR, UR or CS )          ( 0 - 4096 )
>-----+-----+-----+-----+-----+-----+-----+-----+-----+----->
!               ! !               !
+--- ACQUIRE --( _____ )-----+ +--- RELEASE --( _____ )-----+
( USE or ALLOCATE )          ( COMMIT or DEALLOCATE )
>-----+-----+-----+-----+-----+-----+-----+-----+-----+----->
!               ! !               !
+- CURRENTSERVER ( _____ )-+ +--- CURRENTDATA ( ____ )-+
location-name                ( NO or YES )

Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help           Exit   Submi Free                               Prev Next Canc

```

Pressing PF10 (Prev) takes you back to the previous screen.

Pressing PF11 (Next) takes you to a third Bind Plan screen, where you can again specify further options of the DB2 BIND command.

```

16:17:18          ***** NATURAL TOOLS FOR DB2 *****          999-09-30
                        - Bind Plan -

>-----+-----+-----+-----+-----+-----+-----+-----+-----+----->
!               !               !
+--- ACTION --+----- _ (REPLACE) --+-----+-----+-----+
!               !               +--- _ RETAIN --+ !
+----- _ (ADD) -----+
>-----+-----+-----+-----+-----+-----+-----+-----+-----+----->
!               !
+--- DYNAMICRULES - _ ( RUN or BIND ) -----+
>-----+-----+-----+-----+-----+-----+-----+-----+-----+-----><
!               !
+--+ _ - ENABLE ----- ( * ) -----+--+-----+-----+-----+
!               ! +--> DLIBATCH- _ -(con.-names)-+
+- _ - ENABLE --+- _ -(con.-types)-+ +--> CICS ---- _ -(applids)-----+
+- _ - DISABLE -+ +--> IMSBMP -- _ -(imsids)-----+
+--> IMSMPP -- _ -(imsids)-----+

Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help           Exit   Submi Free                               Prev Next Canc

```

Pressing PF11 (Next) takes you to a fourth Bind Plan screen, where you can again specify further options of the DB2 BIND command.

```

16:17:38          ***** NATURAL TOOLS FOR DB2 *****          1999-09-30
                        - Bind Plan -

>-----+-----+-----+-----+-----+-----+-----+-----+----->
      !               !               !               !
      +-- DEGREE --- ____ -+-----+-- SQLRULES --- ____ -+-----+
              ( 1 or ANY )              ( DB2 or STD )

>-----+-----+-----+-----+-----+-----+-----+-----+----->
      !               !
      +-- DISCONNECT ----+---- _ - ( EXPLICIT ) ----+-----+
              +---- _ - ( AUTOMATIC ) ----+
              +---- _ - ( CONDITIONAL) ----+

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help      Exit  Submi Free                                Prev      Canc

```

All parameters necessary to bind a plan are entered on these four screens, which show the syntax of the DB2 BIND PLAN command.

The generated JCL code can be either edited and/or saved in free mode by pressing PF5 (Free), or submitted immediately by pressing PF4 (Submi).



## Rebind Plan

To generate JCL to rebind a plan, invoke the Rebind function by entering function code "RB" on the Application Plan Maintenance menu and "PLAN" or "PL" in the Object field. The first Rebind Plan screen is invoked, where all necessary information must be specified.

[illegible]

Apart from the specifications to be made in the Job Name, Job Cards, and Profile fields, you have to specify the names of the plans to be rebound in a window. If you specify asterisk notation (\*), all existing plans are rebound.

Pressing PF11 (Next) takes you to a second Rebind Plan screen, where you can specify further options of the DB2 REBIND command. A keyword is generated by entering its first letter in the corresponding input field; the default values are highlighted.

```

16:18:15                ***** NATURAL TOOLS FOR DB2 *****                1999-09-30
                                - Rebind Plan -

>-----+-----+-----+-----+-----+-----+-----+-----+-----+----->
!                                     ! !                                     ! !                                     !
+- _____ --( PREPARE )-+ +- FLAG --( _ )-+ +- EXPLAIN --( ____ )-+
( NODEFER or DEFER)                ( I, W, E or C)                ( YES or NO )
>-----+-----+-----+-----+-----+-----+-----+-----+-----+----->
!                                     ! !                                     ! !                                     !
+- VALIDATE ( ____ )-+ +- ISOLATION ( __ )-+ +- CACHESIZE ( ____ )+
( RUN or BIND )                ( RR, CS or UR )                ( 0 - 4096 )
>-----+-----+-----+-----+-----+-----+-----+-----+-----+----->
!                                     ! !                                     !
+--- ACQUIRE --( _____ )-----+ +--- RELEASE --( _____ )---+
( USE or ALLOCATE )                ( COMMIT or DEALLOCATE )
>-----+-----+-----+-----+-----+-----+-----+-----+-----+----->
!                                     ! !                                     !
+- CURRENTSERVER ( _____ )-+ +- CURRENTDATA ( ____ )--+
                                location-name                ( NO or YES )

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help           Exit  Submi Free                                Prev Next Canc

```

Pressing PF10 (Prev) takes you back to the previous screen.

Pressing PF11 (Next) takes you to a third Rebind Plan screen, where you can again specify further options of the DB2 REBIND command.

```

16:18:38                ***** NATURAL TOOLS FOR DB2 *****                1999-09-30
                                - Rebind Plan -

>+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
!                                     !   !                                     !   !                                     !
+- DEGREE - ____ ---+   +- SQLRULES - ____ --+   +- DYNAMICRULES - ____ --+
      ( 1 or ANY )           ( DB2 or STD )           ( RUN or BIND )

>+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
+- DISCONNECT ---+ _ --( EXPLICIT ) -----+
      +-- _ --( AUTOMATIC ) -----+
      +-- _ --( CONDITIONAL ) ---+

>+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
!                                     !                                     !
++-+ _ - ENABLE ----- ( * ) -----+-----+-----+-----+-----+-----+
!                                     ! +->- DLIBATCH- _ -(con.-names)-+
+- _ - ENABLE ---+ _ -(con.-types)-+ +->- CICS ---- _ -(applids)----+
+- _ - DISABLE +-          +->- IMSBMP -- _ -(imsids)-----+
          +->- IMSMPP -- _ -(imsids)-----+

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help           Exit   Submi Free                                     Prev           Canc

```

All parameters necessary to rebind a plan are entered in these three screens, which show the syntax of the DB2 REBIND PLAN command.

The generated JCL code can be either edited and/or saved in free mode by pressing PF5 (Free), or submitted immediately by pressing PF4 (Submi).

## Free Plan

To generate JCL to free a plan, invoke the Free function by entering function code "FR" on the Application Plan Maintenance menu and "PLAN" or "PL" in the Object field. The Free Plan screen is invoked, where all necessary information must be specified.

```

16:19:35          ***** NATURAL TOOLS FOR DB2 *****          1999-09-30
                        - Free Plan -

Job Name ... FREEJOB_          Job Cards .. X          Profile .. EXBIND1_

>>----- FREE PLAN -----+---(plan name)---- X -----+----->
                        !                               !
                        +----- ( * ) ----- _ -----+

>-----+-----+-----+-----+-----+-----+-----+----->
                        !                               !
                        +--- FLAG -----( _ )-----+
                                ( I, W, E or C )

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Exit  Submi Free                                Canc

```

Apart from the specifications to be made in the Job Name, Job Cards, and Profile fields, all parameters necessary to free a plan are entered in a screen showing the syntax of the DB2 FREE PLAN command. The names of the plans to be freed are entered in a window. If you specify asterisk notation (\*), all plans are freed.

The generated JCL code can be either edited and/or saved in free mode by pressing PF5 (Free), or submitted immediately by pressing PF4 (Submi).

## Bind Package

To generate JCL to bind a package, invoke the Bind function by entering function code "BI" on the Application Plan Maintenance menu and "PACKAGE" or "PK" in the Object field. The first Bind Package screen is invoked, where all necessary information must be specified.

```

16:19:58                ***** NATURAL TOOLS FOR DB2 *****                1999-09-30
                                - Bind Package -

Job Name ... BINDJOB_           Job Cards .. X                       Profile .. EXBIND2_

>>- BIND PACKAGE -(-----+----->
                        +- _____ . -+ collection-id
                          location-name

>-----+-----+-----+----->
          + OWNER ( _____ )+ + QUALIFIER ( _____ )+
            auth-id               qualifier-name

>--+- MEMBER ( _____ )+-----+--+
      ! member-name +- LIBRARY --- _ (library-name)-----+ !
      !                                           !
      +- COPY ( _____ . _____ )+-----+--+>
              collection-id package-id +- COPYVER - _ (version-id)-+

Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
       Help         Exit Submi Free                               Next Canc
```

Apart from the specifications to be made in the Job Name, Job Cards, and Profile fields, to BIND a package, you have to specify the collection ID of the package and a DBRM or a further package to be bound into the specified package.

You specify the DBRM or the second package in the MEMBER or COPY field respectively. Either of the fields must be selected and the package ID will be either the DBRM name or the package ID of the copied package.

Pressing PF11 (Next) takes you to a second Bind Package screen, where you can specify further options of the DB2 BIND command. A keyword is generated by entering its first letter in the corresponding input field; the default values are highlighted.

```

16:20:05          ***** NATURAL TOOLS FOR DB2 *****          1999-09-30
                        - Bind Package -

>-----+-----+-----+-----+----->
!               !               !               !
+- SQLERROR ( _____ )-+      +- FLAG --( _ )-+
   ( NOPACKAGE or CONTINUE )      ( I, W, E or C )
>-----+-----+-----+-----+----->
!               ! !               !               !
+- EXPLAIN --( ____ )-+      +- VALIDATE ( ____ )-+
   ( NO or YES )          ( RUN or BIND )
>-----+-----+-----+-----+----->
!               !               !               !
+- ISOLATION ( ____ )-+      +- RELEASE -( _____ )-+
   ( RR, RS, CS, UR or NC)      ( COMMIT or DEALLOCATE )
>-----+-----+-----+-----+----->
!               !               !               !
+- CURRENTDATA ( ____ )-+      +- DYNAMICRULES --( ____ )-+
   ( NO or YES )              ( RUN or BIND )

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Exit  Submi Free                                Prev Next  Canc

```

Pressing PF10 (Prev) takes you back to the previous screen.

Pressing PF11 (Next) takes you to a third Bind Package screen, where you can again specify further options of the DB2 BIND command.

```

16:20:18          ***** NATURAL TOOLS FOR DB2 *****          1999-09-30
                        - Bind Package -

>+-----+-----+-----+-----+-----+>
!               !               !               !
+- ACTION +- _ (REPLACE) -+-----+-----+      +- DEGREE - ____ -+
!               + REPLVER - _ -+ !               ( 1 or ANY )
!               (version-id) !
+- _ (ADD) -----+

>+-----+-----+-----+-----+-----+>
!               !
+-+ _ - ENABLE ----- ( * ) -----+
!               ! +>- DLIBATCH- _ -(con.-names)-+
+- _ - ENABLE ---+ _ -(con.-types)-+ +>- CICS ---- _ -(applids)-----+
+- _ - DISABLE +-      +>- IMSBMP -- _ -(imsids)-----+
+>- IMSMPP -- _ -(imsids)-----+
+>- REMOTE -- _ -(loc/lu-name)+

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Exit  Submi Free                                Prev      Canc

```

All parameters necessary to bind a package are entered on these three screens, which show the syntax of the DB2 BIND package command.

The generated JCL code can be either edited and/or saved in free mode by pressing PF5 (Free), or submitted immediately by pressing PF4 (Submi).

## Rebind Package

To generate JCL to rebind a package, invoke the Rebind function by entering function code "RB" on the Application Plan Maintenance menu and "PACKAGE" or "PK" in the Object field. The first Rebind Package screen is invoked, where all necessary information must be specified.

```

16:20:55          ***** NATURAL TOOLS FOR DB2 *****          1999-09-30
                        - Rebind Package -

Job Name ... FREEJOB_          Job Cards .. X          Profile .. EXBIND2_

>>- REBIND PACKAGE ----->

>+--- _ ----- (*) -----+>
!
+--- _ -(+-----+collection-id.package-id+-----+)-+
      +-location-name.-+          +-.(version-id)-+

>-----+-----+-----+-----+-----+-----+----->
          !          !!          !
          +- OWNER ( _____ )-+ +- QUALIFIER ( _____ )-+
                        auth-id          qualifier-name

Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help      Exit  Submi Free                                Next  Canc

```

Apart from the specifications to be made in the Job Name, Job Cards, and Profile fields, you have to specify the names of the packages to be rebound in a window. If you specify asterisk notation (\*), all locally existing packages are rebound.

Pressing PF11 (Next) takes you to a second Rebind package screen, where you can specify further options of the DB2 REBIND command. A keyword is generated by entering its first letter in the corresponding input field; the default values are highlighted.

```

16:21:21          ***** NATURAL TOOLS FOR DB2 *****          1999-09-30
                        - Rebind Package -

>-----+-----+-----+-----+----->
!               !               !               !
+- FLAG -----( _ )---+               +- DEGREE --( ____ )--+
   ( I, W, E or C )               ( 1 or ANY )
>-----+-----+-----+-----+----->
!               !               !               !
+- EXPLAIN --( ____ )-+               +- VALIDATE ( ____ )-+
   ( NO or YES )               ( RUN or BIND )
>-----+-----+-----+-----+----->
!               !               !               !
+- ISOLATION ( ____ )--+               +- RELEASE -( _____ )-+
   ( RR, RS, CS, UR or NC )       ( COMMIT or DEALLOCATE )
>-----+-----+-----+-----+----->
!               !               !               !
+- CURRENTDATA ( ____ )-+               +- DYNAMICRULES -( ____ )--+
   ( NO or YES )               ( RUN OR BIND )

Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit  Submi Free                               Prev Next  Canc

```

Pressing PF10 (Prev) takes you back to the previous screen.

Pressing PF11 (Next) takes you to a third Rebind package screen, where you can again specify further options of the DB2 REBIND command.

```

16:21:38          ***** NATURAL TOOLS FOR DB2 *****          1999-09-30
                        - Rebind Package -

>+-----+-----+-----+-----+-----+>
!               !               !               !
+-+ _ - ENABLE ----- ( * ) -----+-----+-----+-----+
!               !               !               !
+- _ - ENABLE --+ _ -(con.-types)-+ +->- DLIBATCH- _ -(con.-names)-+
+- _ - DISABLE -+               +->- CICS ---- _ -(applids)-+
               +->- IMSBMP -- _ -(imsids)-+
               +->- IMSMPP -- _ -(imsids)-+
               +->- REMOTE -- _ -(loc/lu-name)+

Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit  Submi Free                               Prev      Canc

```

All parameters necessary to rebind a package are entered in these two screens, which show the syntax of the DB2 REBIND PACKAGE command

The generated JCL code can be either edited and/or saved in free mode by pressing PF5 (Free), or submitted immediately by pressing PF4 (Submi).

## Free Package

To generate JCL to free a package, invoke the Free Package function by entering function code "FR" on the Application Plan Maintenance menu and "PACKAGE" or "PK" in the Object field. The Free Package screen is invoked, where all necessary information must be specified.

```

16:22:05          ***** NATURAL TOOLS FOR DB2 *****          1999-09-30
                        - Free Package -

Job Name ... FREEJOB_          Job Cards .. X          Profile .. EXBIND2_

>>-- FREE PACKAGE ----->

>--+ _ ----- (*) -----+>
!
+- _ --(+-----+collection-id.+----- (*) -----+)+
      +location-name.+          +package-id+-----+
                                +.---- (*) ----+
                                +.(version-id)+

>-----+-----+-----><
              !                      !
            +--- FLAG -----( _ )-----+
                      ( I, W, E or C )

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Exit  Submi Free                                Canc

```

Apart from the specifications to be made in the Job Name, Job Cards, and Profile fields, all parameters necessary to free a package are entered in a screen showing the syntax of the DB2 FREE PACKAGE command. The names of the packages to be freed are entered in a window. If you specify asterisk notation (\*), all local packages are freed.

The generated JCL code can be either edited and/or saved in free mode by pressing PF5 (Free), or submitted immediately by pressing PF4 (Submi).



## List JCL Function

The List JCL function serves to invoke the free-mode editor via the Application Plan Maintenance menu. To do so, enter function code "LJ". If you leave the JCL Member field blank, the empty free-mode editor is invoked. If you specify a value followed by an asterisk, or specify asterisk notation only, a list of JCL members is displayed for selection. If you specify a valid member name, the invoked free-mode editor contains the corresponding JCL.

```

16:18:18          ***** NATURAL TOOLS FOR DB2 *****                      1999-09-30
APM - free mode    TESTLIB(TESTPLAN)      S 01- -----Columns 001 072
=====>                                         Scroll ==>  PAGE
***** ***** top of data *****
00001 //BINDJOB  JOB TESTPLAN,CLASS=K,MSGCLASS=X
00002 //*****
00003 //* EXAMPLE JOB PROFILE FOR BIND, FREE AND REBIND          *
00004 //*                                                    *
00005 //* BIND PLAN                                                    *
00006 //*****
00007 //BINDJOB  EXEC PGM=IKJEFT01,DYNAMNBR=20,REGION=4096K
00008 //STEPLIB DD DSN=DB2.Vnnn.DSNLOAD,DISP=SHR
00009 //DBRMLIB DD DSN=DB2.Vnnn.DBRMLIB.DATA,DISP=SHR
00010 //SYSTSPRT DD SYSOUT=*
00011 //SYSPRINT DD SYSOUT=*
00012 //SYSUDUMP DD SYSOUT=*
00013 //SYSTSIN  DD *
00014 DSN SYSTEM (DB2)
00015      BIND PLAN (PLAN1)
00016      MEMBER ( DBRM1)
00017 END

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Exit  Submi Rfind Rchan -      +      <      >      Canc

```

Within the free-mode editor, JCL members can be copied, listed, purged, retrieved from, or saved in a Natural library. All this is done via maintenance commands.

Press PF4 (Submi) to submit JCL code listed in the editor, press PF5 (Fix) to switch to fixed mode.

## Display Job Output

The Display Job Output function is available only if the Entire System Server is installed.

If you want to display the output of a JCL member, enter function code "JO" on the Application Plan Maintenance menu to invoke the Display Job Output function; the default node number (148) for Entire System Server can be modified. A screen is invoked, where you can specify the desired job name and job number, as well as the numbers of the SYSOUT types.

16:20:05	***** NATURAL TOOLS FOR DB2 *****	1999-09-30
- Application Plan Maintenance -		
Job Name .....	_____	
Job Number .....	_____	
Sysout Type .....	_____	( CC,JL,SI,SM,SO )
Sysout Number ...	_____	( Sysout file number )
Node .....	148	
Command ==>		
Enter-PF1---	PF2---PF3---	PF4---PF5---
PF6---	PF7---	PF8---
PF9---	PF10---	PF11---
PF12---		
Help	Exit	Logn Canc

In the Job Name field, a valid job name can be specified.

If you specify a value followed by an asterisk, or specify asterisk notation only, a list of job output members is displayed for selection. In a job output member selection list, you can mark an output member with either "B" to display the member only, or "L" to display a list of all the job output's SYSOUTs, which in turn can be marked with "B" for display.

If you leave the Job Name field blank, you must specify a job number.

In the Job Number field, you can specify a unique job number. Only if a unique job number has been specified, specifications can be made in the Sysout Type and Sysout Number fields, too.

In the Sysout Type field, you can specify the type of SYSOUT dataset of the job with the specified job number to be displayed. The following codes apply:

<b>Code</b>	<b>SYSOUT Type</b>
CC	Condition Code
JL	Job Listing
SI	System Input
SM	System Message
SO	System Output

In the Sysout Number field, you can specify a file number to display a specific SYSOUT dataset of the type specified in the Sysout type field. If you leave the Sysout Number field blank, all SYSOUT datasets of the specified type are displayed.